WEBQUESTS: A STRATEGY TO ADDRESS THE "CONTENT" DILEMMA IN TEACHER EDUCATION COURSEWORK

By

MARIE FERO*

ABSTRACT

The purpose of this article is to propose the use of technology integration in elementary and middle level education courses, specifically, the use of WebQuests as vehicles for the infusion of content knowledge in pre-service and in-service education courses. Observation in content area teaching method courses found that teacher candidates often had deficiencies in content areas. The purpose of this research was to demonstrate that the teaching of content can be integrated with the teaching of methodology. The article is a meta-analysis of the literature that addresses the issue of technology use in teacher education coursework, with an emphasis on the inclusion of WebQuests as part of course requirements. The review of literature combined with a prior research found that teacher candidates increase content knowledge when the development of WebQuests are included in teaching methodology courses.

Keywords: WebQuests; Teacher Education, Technology integration, Methods courses.

INTRODUCTION

Teacher education faculty ore frequently concerned about how to reinforce content in their elementary methods courses. They hove struggled with this concern while writing syllabi that seemed to be "methods-heovy", or just a succession of "octivities". It is true that methods courses are not meant to teach content, but instead to draw upon the content knowledge of students by teaching ways in which to deliver said content. However, it is still imperative that teachers of educational methods must ot least reinforce content knowledge as much as possible to help and to ensure students' survival in the first crucial yeors of teoching, and into the future.

The purpose of this article is to propose the use of technology integration in elementary and middle level education courses, specificolly, the use of WebQuests as vehicles for the infusion of content knowledge in pre-service and in-service educotion courses. This technology approach has helped this author to use the web as a true reseorch tool, instead of a place to merely download lessons to use olong with information from a textbook.

Technology educotion is essential to our society in the 21st century, and will not go away quietly, as some teachers may believe. "The National Council for the Accreditation of Teacher Educotion (NCATE, 1997) colled for improvements in the integration of technology in teacher education progroms, and their most recent standords (NCATE, 2002) included technology os on importont aspect of the education of teachers" (Crowe, 2004, p. 159).

It is also important to understand that technology will not sove educotion. "Good teaching is good teoching, regardless of the tools used" (Hodges, 2005, p.1). The author further states that there are many uninspiring ways to use computer technology. Computers have been used in classrooms for word processing, drills, ond remedial work. "Technology as used in WebQuests engages higher order thinking skills, a pedagogically sound practice" (Hodges 2005). Through WebQuests, students ore enabled to be producers and consumers of knowledge, collaborators and researchers. Students can also publish their work on the web.

1. Creation of Web Quests

WebQuests were originally developed by Bernie Dodge and Tom March ot San Diego Stote University in 1995. "A WebQuest is an inquiry-based form of classroom learning soys Bernie Dodge, who also coined the phrase" (Hodges, 2005, p. 2).

The creation of a WebQuest is work-intensive for the

teacher. First, leading questions must be established for whatever content is to be learned. Second, the creator searches websites for the answers to these questions. Structuring questions in terms of Bloom's Levels of Thinking can be very beneficial for the creator of the WebQuests, and the students using them. Students are grouped, assigned roles, and are sent out to the web to research questions established by the teacher. Findings are presented by each group. The conclusion is usually designated for extension activities. "Webquests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis, and evaluation" (Stinson, 2003, p. 3).

2. Web Quests in Educational Technology Course

It appears that one of the best places to introduce WebQuests is technology in education courses, which are usually prerequisites to education methods courses. In a University of North Florida study, students in an educational technology course completed a WebQuest as an implementation of project-based learning. This theory is "based on the idea that the best form of professional development is learning by doing" (Cavanaugh 2005). The WebQuests created in this study met K-12 standards in content areas such as science, math, or social studies. "When students completed the WebQuest project, they had evidence of essential technology skills, they had deep knowledge of content area, they had experience tailoring instruction to meet grade level standards, and they had a product that they can use as teachers" (Cavanaugh, 2005, p.4). According to this author, comments from students at the end of a semester on working on webquests in an Educational Technology course supported the above statement. One student reported:

" In the future I plan to do many Webquests for my students to use. I feel that these not only help the children to learn the information that I want them to learn, but at the same time they are also, unknowingly, learning how to better use computers. Webquests make the learning process so much more fun than, simply using textbooks and other traditional ways of teaching lessons."

WebQuests can be beneficial in all teaching disciplines. In an article describing approaches used by faculty in Curriculum and Instruction at Iowa State University, WebQuests on literature were used as projects for the intermediate literacy methods course. In this project, students who had already created WebQuests in the required Educational Technology course easily applied their knowledge to literature. Students were studying the whole-class literature study approach, and were asked to read *Sarah Plain and Tall* (MacLachlan, 1985). Students teamed to create WebQuests on the book. They gave special emphasis to the task portion of the WebQuest by formulating a science-related task for *Sarah Plain and Tall* (Schmidt, Merkley, and Fuhler (2004).

It is worth noting here a study by a teacher of secondary social studies methods, who become committed to technology infused teaching at Kent State University after realizing that students were not using technology during their final year of an integrated social studies program, which required a 96 hour practicum, and a ten week student teaching block. The author reported approaching this technology project in two ways: (i) through the "development and implementation of a technology project that students completed and (ii) through the instructors' modeling of different strategies for using technology in classroom instruction" (Crowe, 2004). The author modeled the use of WebQuests as teaching tools. WebQuests were used to teach content, cooperative learning, and one was used to integrate social studies with technology. Students were asked to integrate technology into their field experience classes, including student teaching. At the end of the semester, students were interviewed and surveyed on their experiences. Overall, students were pleased about the hands-on learning that was provided through the creation of WebQuests. One student remarked that

"Education teachers would tell you to do all this stuff while they were lecturing it and I could never relate because it seemed like everything we were taught to do we were actually doing it" (Crowe, 2004).

The author reported that integrating technology into social studies classes indicated that prospective teachers need to experience learning with technology in classroom settings, as students in her methods courses did. The author also stated that teachers who use technology, or do not use technology in education classes strongly influences pre-service teachers as to how they should teach.

3. Technology Integration through Web Quests

According to Bowman (2000), good teaching can be enhanced by the use of technology, and can actively engage students with the writing process and texts. As in the last study reported, the author, who teaches English language arts at Florida State University, had not seen any students integrating technology into their teaching. Reasons given by students for this lack of technology incorporation included their inability of how to use technology with their assignments, resistance of cooperating teachers, and fears about classroom management. The author was then impelled to integrate creative methods of technology integration with the pre-service teachers.

To begin the process of easing into technology, the teacher distributed one poem and a disposable camera to each student on the first day of class. They were asked to read the poem, and then wander around the campus taking pictures of sights and scenes that illustrated and captured the emotions evoked by the poet. This led to discussions by students about the pictures and poems. Pictures were scanned into overheads or PowerPoint presentations. These activities, and more, led to the creation of WebQuests. According to the author, the creation of WebQuests includes planning that is analogous to writing an innovative and exciting lesson plan. It also enables students to integrate technology into lessons, instead of adding a technology lesson that stands on its own. WebQuests allow students to assign creative activities, students' roles, and assignments that are unique and are designed to further stretch students learning, along with enhancing understanding of the text. Students at FSU use the technology strategies they learned to create an award-winning web site. They also collaborated with students in local middle schools to improve in a dramatic fashion, literacy skills of reluctant readers.

Conclusion

The author believes that as methods professors model technology in context, more powerful learning takes place and that classroom teachers who serve as mentors to pre-service teachers must support the pre-service teachers' efforts to implement technology in order to improve the literacy skills of students. The author concludes that:

As future teachers of English language arts, pre-service teachers in methods classes need to view technology as a means to collect information, capture ideas, and make meaning where students summarize, synthesize, evaluate, select, reject, listen, read, organize, interpret, talk, write, edit and revise. Technology is all about integration and finding connections, integrating one skill with others, uniting school with the world, the mind with the body, and the child with the adult one wants to become. (p. 5).

The literature found on the use of WebQuests in both k-12 and education coursework is positive overall, although it appears that its use in teacher education methods has just started to take off. Professors who are reluctant users of technology might consider the use of webquests as a way of easing into technology integration in their classrooms. It is a perfect vehicle for the implementation of state teaching and professional standards, something that is usually a daunting task for all of us in teacher education. Those teachers who are already steady users of technology should be encouraged to continue their experiments, and to pass on their ideas on to their colleagues.

For information and tutorials on webquests: http://www.uhv.edu/webct/students/orientation/tutorials/webquest_resources.htm

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ABOUT THE AUTHOR

* *Assistant Professor, Early Childhood, Elementary and Middle Level Education, Eastern Illinois University.*

Dr. Marie Fero is an Assistant Professor of Early Childhood, Elementary, and Middle Level Education at Eastern Illinois University. She holds degrees in Music, elementary education, and educational leadership. She has taught classroom music, elementary classroom, gifted education, and Title I reading. She has held posts as elementary principal and as an academic chair of education. She can be contacted at mfero@charter.net